Amendments to the Drawings

The drawings have been objected to as failing to comply with 37 CFR 1.84(p)(5) because they include reference characters not mentioned in the description.

In response, replacement drawing sheets are being submitted for Fig. 2 and Fig. 4. The reference characters 308 and 312 have been removed from Fig. 4 and reference character 102 has been removed from Fig. 2. The reference character "104" has been replaced with reference character "'108". (*See* Page 6, lines 11-13 in Applicant's specification as originally filed.) Removal of the objection to the drawings is respectfully requested.

Attachment: Replacement Sheet
Annotated Marked-Up Drawings

REMARKS

Claims 1-23 were pending of which Claims 1, 8, 15, 22 and 23 are independent claims. Claims 24-25 are newly added. Support for the newly added claims are is in the applicants specification as originally filed. (*See* Figs. 4 and 5 and Page 12, line 22- Page 13, line 15.)

Claims 1-23 have been provisionally rejected under the judicially-created doctrine of double patenting over claims 1-25 of co-pending Application No. 09/886,650. The Applicant wishes to place this rejection in abeyance until the claims are otherwise allowable.

Claims 1-23 were rejected under 35 U.S.C. § 102(e). To expedite prosecution, the claims as now amended and newly added are believed to be patentable over the cited references.

Regarding Rejections

Before discussing the cited reference however, a brief review of the Applicant's disclosure may be helpful.

A longest prefix match lookup table allows searching with longer search keys including search keys of different lengths such as the 32-bit IPv4 and 128-bit IPv6 addresses. The lookup table includes a plurality of mappers. The mappers are indexed by successive portions of a search key and partial indexes from prior mappers, to output a route index for the search key or to output partial indexes to subsequent mappers. The lookup table also includes a partial index feedback loop by which a mapper is indexed in multiple passes with multiple successive portions of the search key. The route index corresponding to the search key is stored in a single location in one of the plurality of mappers. The length of the search key is variable. The search key may include a 32-bit IPv4 address or a 128 IPv6 address. If the search key includes a 32-bit IPv4 address, the route index corresponding to the search key is found within a first search of the plurality of mappers. With a 128-bit IPv6 address, the route index may be found within a first search of the mappers or in a subsequent search through the mappers. The partial index may be a subtree index. (*See* Abstract, Fig. 3B and Fig. 5.)

Regarding Rejection under 35 U.S.C. 102(e)

Claims 1-23 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Hunter et al. (U.S. Patent No. 6,223,172).

Cited prior art, Hunter is directed to a system for performing a longest match search by comparing a portion of an address indicated by a mask to entries in a forward database. The search starts with a search for a match for the full address and then uses progressively shorter masks determined based upon the masked address for each subsequent search of the forwarding database until a matching entry is located.

Hunter's discussion of a hash table containing a plurality of bins does not teach or suggest the applicant's disclosed "plurality of mappers". Hunter merely discusses a single hash table having a plurality of entries that is searched multiple times using a different masked address.

In contrast, the Applicant's disclosed "mappers are indexed by successive portions of a search key and partial indexes from prior mappers". (*See* Claim 1). A search of the applicant's disclosed mapper results in a partial index which is used for a subsequent search of another mapper in the lookup table. In the system discussed by Hunter, the hash table includes a plurality of bins and each subsequent search of the hash table is independent of the other searches and uses a shorter search key. Hunter does not discuss at least the applicant's disclosed mappers or the use of partial indexes from prior mappers. The bins in the hash table discussed by Hunter are merely indexed according to a masked search key In contrast to the Applicants' disclosed lookup table, Hunter discusses the advantage of decoupling the results of prior memory accesses from the determination of succeeding memory accesses in the hash table. (*See* Col. 3, lines 64 - col. 4, line 11.)

Hunter does not teach or suggest indexing with successive portions of a search key as disclosed by the Applicants. In contrast, the search discussed by Hunter starts with the full address and the address is shortened in subsequent searches. As shown in Fig. 3B of the Applicant's specification, each mapper is indexed by successive portions of the search key. (*See* Fig. 3B, key 210a-d, mappers 206a-d.)

Claims 2-7 and 24-25 are dependent on Claim 1 and thus include this limitation over the prior art. Independent Claims 8, 15, 22 and 23 and claims dependent on claims 8 and 15 include like limitations distinguishing the cited art.

As such the § 102 rejection of Claims 1-23 is believed to be overcome.

Accordingly, the present invention as now claimed is not believed to be anticipated by or made obvious from the cited art or any of the prior art. Removal of the rejections of claims 1-23 under 35 U.S.C. 102(e) and acceptance of Claims 1-25 is respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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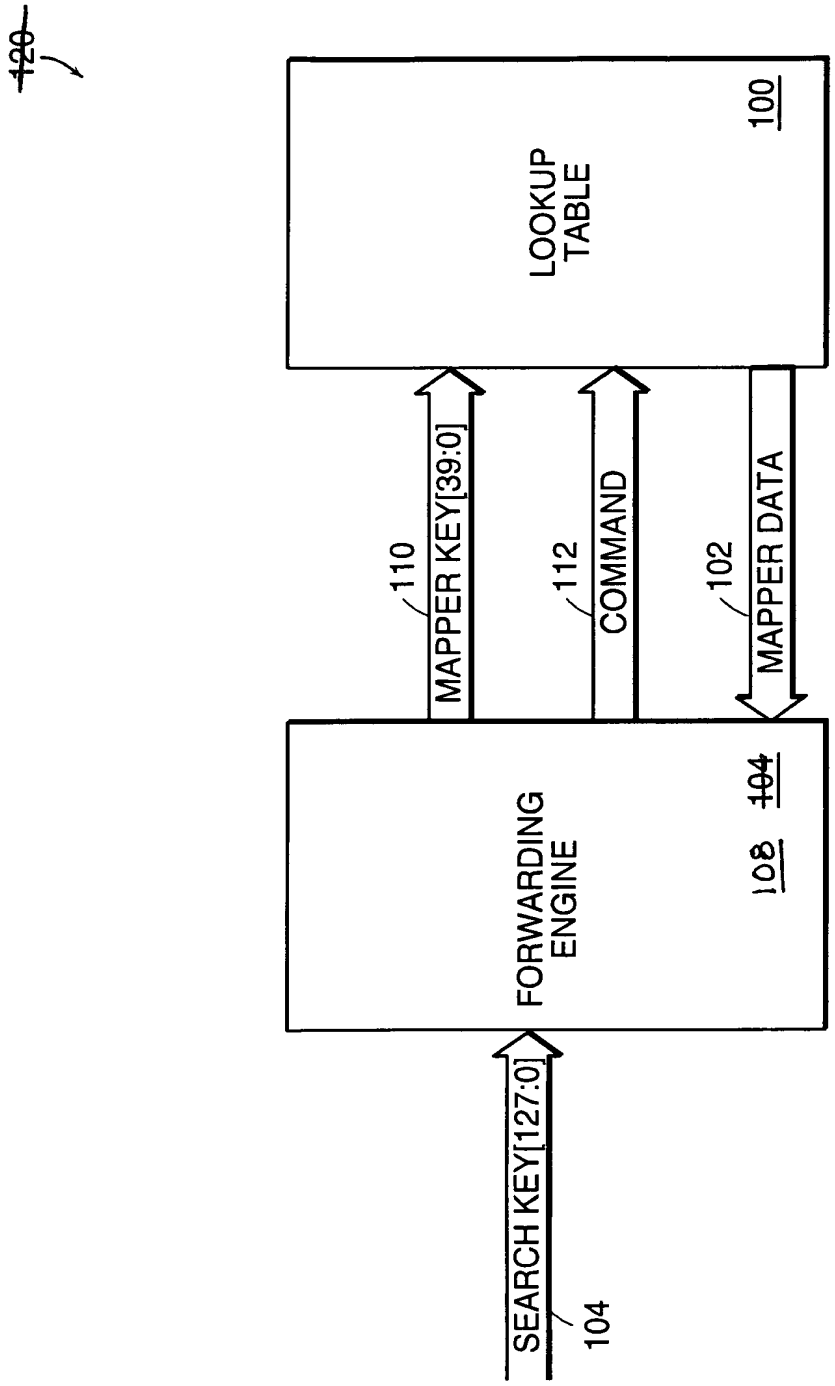

FIG. 2

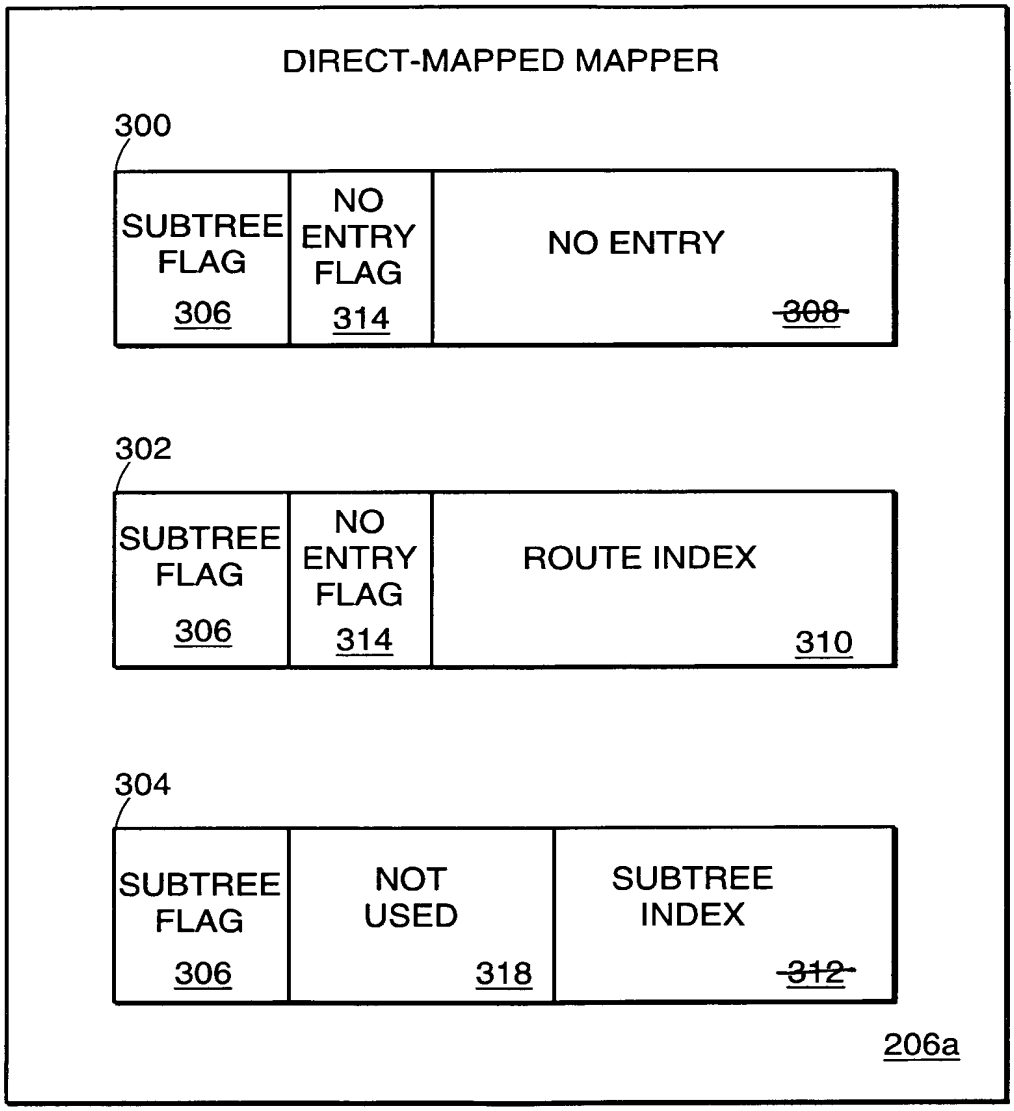

FIG. 4